

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
HAZARDOUS WASTE POST-CLOSURE PERMIT

Name of Permittee: Haynes International, Inc.

Facility Location: 2000 W. Defenbaugh Street, Kokomo, Indiana

EPA Identification Number: IND984867481

Issuance Date: September 14, 2007

Expiration Date: October 4, 2012

Authorized Activities

Pursuant to the Indiana Environmental Statutes (IC 13) and the rules promulgated thereunder and codified in Title 329 of the Indiana Administrative Code, Article 3.1 (329 IAC 3.1), the State permit conditions (hereinafter called the permit) of the Resource Conservation and Recovery Act of 1976 (RCRA) permit are issued to Haynes International, Inc. (hereinafter called the Permittee) to maintain and monitor two (2) closed hazardous waste landfills located in Kokomo, Indiana, Section 2, Township 23 North, Range 3 East at latitude 40° 28' 16" N and longitude 86° 09' 33" W, Kokomo West Quadrangle, on the U.S. Geological Survey topographic map.

The State RCRA program is authorized under 40 CFR Part 271 and Section 3006 of RCRA to administer the hazardous waste management program in lieu of the Federal program.

The Permittee is required to maintain and monitor the closed landfills for the duration of this permit.

Federal regulations 40 CFR Parts 260 through 270 have been incorporated by reference. Where exceptions to incorporated Federal regulations are necessary, these exceptions will be noted in the text of the State rule (329 IAC 3.1-1-7).

### Applicable Regulations

The conditions of this post-closure permit were developed in accordance with the following applicable provisions of 329 IAC 3.1:

- ID & Listing of Hazardous Waste: 329 IAC 3.1-6, 40 CFR 261
- Standards for Owners and Operators of Treatment, Storage, and Disposal Facilities: 329 IAC 3.1-9, 40 CFR 264 Subpart A
- General Facility Standards: 329 IAC 3.1-9, 40 CFR 264 Subpart B
- Groundwater Protection: 329 IAC 3.1-9, 40 CFR 264 Subpart F
- Post-Closure: 329 IAC 3.1-9, 40 CFR 264 Subpart G
- Financial Requirements: 329 IAC 3.1-15
- Landfills: 329 IAC 3.1-9, 40 CFR 264 Subpart N
- Corrective Action for Solid Waste Management Units: 329 IAC 3.1-9, 40 CFR 264 Subpart S
- Hazardous Waste Permit Programs: 329 IAC 3.1-13, 40 CFR 270 Subparts A, B, C, and D
- Inspection and Investigation: 329 IAC 3.1-1-3 and 329 IAC 3.1-1-4
- Enforcement: 329 IAC 3.1-1-5

### Permit Approval

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments and exhibits) and the applicable rules and requirements contained in 329 IAC 3.1 and 40 CFR 260 through 270 as specified in the permit. Applicable rules are those which are in effect on the date of issuance of this permit. (See 329 IAC 3.1-13; 40 CFR 270.32)

This permit is based on the assumption that the information submitted in the post-closure permit application attached to the Permittee's letter dated March 16, 2007, and any subsequent amendments (hereafter referred to as the application) is accurate and that the facility has been or will be constructed and/or operated as specified in the application. Any inaccuracies found in the application may be grounds for the modification, revocation and reissuance, or termination of this permit (329 IAC 3.1-13-7), and potential enforcement action. The Permittee must inform the Indiana Department of Environmental Management (IDEM) of any deviation from, or changes in, the information in the application which would affect the Permittee's ability to comply with the applicable rules or permit conditions.

Pursuant to IC 13-15-5-3 and IC 4-21.5-3-5(f), this permit takes effect fifteen (15) days from receipt of this notice. If you wish to challenge this decision, IC 13-15-6-1 and IC 4-21.5-3-7 require that you file a Petition for Administrative Review. If you seek to have the effectiveness of the permit stayed during administrative review, you must also file a Petition for Stay. The petition(s) must be submitted to the Office of Environmental Adjudication, Government Center North, Room 1049, 100 North Senate Avenue, Indianapolis, Indiana 46204, within fifteen (15) days after your receipt of this notice. The petition(s) must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision, or otherwise entitled to review by law. Identifying the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, or date of this notice will expedite review of the petition. Additionally, IC 13-15-6-2 requires that a Petition for Administrative Review must include:

1. The name and address of the person making the request.
2. The interest of the person making the request.
3. Identification of any persons represented by the person making the request.
4. The reasons, with particularity, for the request.
5. The issues, with particularity, proposed for consideration at the hearing.
6. Identification of the terms of the permit which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the

requirements of the law governing licenses of the type granted or denied by the Commissioner.

Pursuant to IC 4-21.5-3-1(f), any document serving as a petition for review or review and stay must be filed with the Office of Environmental Adjudication. Filing of such a document is complete on the earliest of the following dates:

1. the date on which the petition is delivered to the Office of Environmental Adjudication, Government Center North, Room 1049, 100 North Senate Avenue, Indianapolis, Indiana 46204;
2. the date of the postmark on the envelope containing the petition, if the petition is mailed by United States mail; or
3. the date on which the petition is deposited with a private carrier, as shown by a receipt issued by the carrier, if the petition is sent by private carrier.

The portions of the permit for which a Petition for Stay has been filed will take effect at the expiration of the additional fifteen (15)-day period unless or until an Environmental Law Judge stays the permit in whole or in part. This permit shall remain in effect until five (5) years from the effective date unless revoked and reissued, modified, or terminated (329 IAC 3.1-13-7), or continued in accordance with IC 13-15-6-3.

This permit terminates and supersedes any other State hazardous waste management permit.

Issued this 14<sup>th</sup> day of September 2007.

By:

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Thomas E. Linson, Chief  
Permits Branch  
Office of Land Quality

Haynes International, Inc.  
Kokomo, Indiana  
IND984867481

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## **I. STANDARD CONDITIONS**

### **A. EFFECT OF PERMIT**

The Permittee is authorized to maintain and monitor disposed hazardous waste in accordance with the conditions of this State hazardous waste management post-closure permit. Any management of hazardous waste not authorized in this permit or the regulations is prohibited.

Pursuant to 329 IAC 3.1 and 40 CFR 260 through 270 (for HSWA Provisions), compliance with the conditions of this State hazardous waste management permit generally constitutes compliance for purposes of enforcement, with the Indiana Environmental Statutes and Resource Conservation and Recovery Act (RCRA), as amended by Hazardous Solid Waste Amendments (HSWA), except for those requirements not included in the Permit which become effective by statute, or which are promulgated under 329 IAC 3.1 and 40 CFR Section 260 through 270, restricting the placement of hazardous wastes in or on the land. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of Federal, State, or local laws or regulations. Compliance with the terms of this permit does not constitute a defense to any Order issued or any action brought under Section 3013 or Section 7003 of RCRA; Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601), commonly known as CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 9606(a)), commonly known as SARA, or any other law providing for protection of public health or the environment. 329 IAC 3.1-13; 40 CFR 270.4; IC 13

### **B. PERMIT ACTIONS**

This permit may be modified, revoked and reissued, or terminated for cause as specified in 329 IAC 3.1-13-7. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

### **C. SEVERABILITY**

The provisions of the permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. In the event that a condition of this permit is stayed for any reason, all provisions of the permit severable from the stayed provisions shall take

effect. With regard to stayed provisions of the permit, the Permittee shall continue to comply with the related applicable and relevant Permitted standards in 329 IAC 3.1-9 and 329 IAC 3.1-15 from the previously issued permit until final resolution of the stayed condition, unless the Commissioner of the Indiana Department of Environmental Management (Commissioner) determines that compliance with the related applicable and relevant standards would be technologically incompatible with other conditions of this permit which have not been stayed. 329 IAC 3.1-13; 40 CFR 270.32

D. DUTIES AND REQUIREMENTS

1. Duty to Comply The Permittee shall comply with all conditions of the State hazardous waste management permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of IC 13 and is grounds for enforcement action or permit modification. 329 IAC 3.1-13-1; 40 CFR 270.30(a); 270.61
2. Duty to Reapply The Permittee shall submit a complete application for a new permit at least 180 days before this permit expires unless: a) the Permittee is no longer required to have a State hazardous waste management permit, or b) permission for submittal on a later date has been granted by the Commissioner (The Commissioner will not grant permission for the application to be submitted later than the expiration date of the existing permit.) 329 IAC 3.1-13-1; 329 IAC 3.1-13-3(h); 40 CFR 270.30(b)
3. Permit Expiration The duration of this permit shall not exceed five (5) years from the effective date of the permit, except as provided by 329 IAC 3.1-13-15. This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application for a new permit and through no fault of the Permittee, the Commissioner has not issued a new permit with an effective date under 329 IAC 3.1-13-14 on or before the expiration date of the previous permit. In the event the Permittee does not submit a complete renewal application in accordance with Permit Condition I.D.2., all conditions herein will remain in effect until the permittee is notified otherwise by the Commissioner.
4. Need to Halt or Reduce Activity Not a Defense It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. 329 IAC 3.1-13-1; 40 CFR 270.30(c)
5. Duty to Mitigate In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts



on human health or the environment. 329 IAC 3.1-13-1; 40 CFR 270.30(d)

6. Proper Operation and Maintenance The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of a back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of the permit. 329 IAC 3.1-13-1; 40 CFR 270.30(e)
7. Duty to Provide Information The Permittee shall furnish to the Commissioner, within a reasonable time, any relevant information which the Commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this permit. 329 IAC 3.1-13-1; 40 CFR 270.30(h); 329 IAC 3.1-9-1; 40 CFR 264.74
8. Inspection and Entry Pursuant to 329 IAC 3.1-13-1 and 40 CFR 270.30(i), the Permittee shall allow the Commissioner, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
  - a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit (329 IAC 3.1-13-1; 40 CFR 270.30(i)(1));
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit (329 IAC 3.1-13-1; 40 CFR 270.30(i)(2));
  - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit (329 IAC 3.1-13-1; 40 CFR 270.30(i)(3)); and
  - d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by IC 13, any substances or parameters at any location (329 IAC 3.1-13-1; 40 CFR 270.30(i)(4)).

9. Monitoring and Reporting

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the groundwater to be analyzed must be the appropriate method from 329 IAC 3.1-6-1; 40 CFR 261, Appendix I. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW- 846 (as referenced in 40 CFR 260.11); Standard Methods for the Examination of Water and Wastewater, (20th Edition, 1998); or an equivalent method as specified in the attached Groundwater Monitoring Plan. 329 IAC 3.1-13-1; 40 CFR 270.30(j)(1)
- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least three (3) years from the date of the sample, measurement, report, or record or for a period of time greater than three (3) years as specified elsewhere in this permit. These periods may be extended by request of the Commissioner at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility. 329 IAC 3.1-13-1; 40 CFR 270.30(j)(2) and 40 CFR 264.74(b)
- c. Pursuant to 329 IAC 3.1-13-1; 40 CFR 270.30(j)(3), records of monitoring information shall include:
  - i. The date(s), exact place, and times of sampling or measurements;
  - ii. The individual(s) who performed the sampling or measurements;
  - iii. The date(s) analyses were performed;
  - iv. The individual(s) and laboratory who performed the analyses;
  - v. The analytical technique(s) or method(s) used. Analytical technique(s) or method(s) is defined as encompassing both the sampling technique (method) and method of chemical analysis used; and
  - vi. The result(s) of such analyses, including QA/QC documentation.

- d. Monitoring results shall be reported to the Commissioner at the intervals specified elsewhere in this permit. 329 IAC 3.1-13-1; 40 CFR 270.30(1)(4)
- 10. Reporting Planned Changes The Permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. 329 IAC 3.1-13-1; 40 CFR 270.30(1)(1)
- 11. Transfer of Permits This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 329 IAC 3.1-13-1; 40 CFR 270.40(b) or 40 CFR 270.41(b)(2) to identify the new permittee and incorporate such other requirements as may be necessary under IC 13. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator, in writing, of the requirements of 329 IAC 3.1 and IC 13. 329 IAC 3.1-13-1; 40 CFR 270.40
- 12. Reporting Anticipated Noncompliance The Permittee shall give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Such notification does not excuse the Permittee's duty to comply with permit requirements. 329 IAC 3.1-13-1; 40 CFR 270.30(1)(2)
- 13. Compliance Schedules Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date. 329 IAC 3.1-13-1; 40 CFR 270.30(1)(5)
- 14. Twenty-four Hour Reporting The Permittee shall report to the Commissioner any noncompliance with the permit which may endanger health or the environment. Any such information shall be reported orally to the IDEM 24 hour emergency telephone number 888/233-7745, within twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. Pursuant to 329 IAC 3.1-13-1; 40 CFR 270.30(1)(6), this report shall include the following:
  - a. Information concerning the release of any hazardous waste which may endanger public drinking water supplies.
  - b. Information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:
    - i. Name, address, and telephone number of the owner or operator;

- ii. Name, address, and telephone number of the facility;
- iii. Date, time, and type of incident;
- iv. Name and quantity of material(s) involved;
- v. The extent of injuries, if any;
- vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
- vii. Estimated quantity and disposition of recovered material that resulted from the incident.

A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee need not comply with the five (5)-day written notice requirement if the Commissioner waives the requirement and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances.

- 15. Other Noncompliance The Permittee shall report all instances of noncompliance not otherwise required to be reported under Conditions I.D.12.-14., at the time monitoring reports, as required by this permit, are submitted. The reports shall contain the information listed in Condition I.D.14. 329 IAC 3.1-13-1; 40 CFR 270.30(1)(10)
- 16. Other Information When the Permittee becomes aware that the facility failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Commissioner, the Permittee shall promptly submit such facts or information. 329 IAC 3.1-13-1; 40 CFR 270.30(1)(11)
- 17. Submittal of Reports or Other Information All reports or other information required to be submitted by the terms of this permit shall be sent to:

Commissioner  
Indiana Department of Environmental Management  
100 North Senate Avenue

Indianapolis, IN 46204  
Attention: Chief, OLQ Permits Branch

18. All other requirements contained in RCRA, as amended, and in 40 CFR 270.30 not set forth herein are hereby fully incorporated in this permit.

E. SIGNATORY REQUIREMENT

All reports or other information requested by the Commissioner shall be signed and certified as required by 329 IAC 3.1-13-1; 40 CFR 270.11.

F. CONFIDENTIAL INFORMATION

The Permittee may claim confidential any information required to be submitted by this permit in accordance with 329 IAC 3.1-13-4, and IC 13-14-11-1.

G. DOCUMENTS TO BE MAINTAINED AT FACILITY SITE

Except as noted, the Permittee shall maintain at the facility, until the post-closure period is completed and certified by the owner/operator and an independent registered professional engineer, the following documents and amendments, revisions and modifications to these documents:

1. Groundwater Monitoring Plan as required by 329 IAC 3.1-9, 40 CFR 264.97 and this permit and any document(s) referenced therein to describe on-site procedures.
2. Groundwater monitoring data as required by 329 IAC 3.1-9, 40 CFR 264.97 and this permit.
3. Post-Closure Plan as required by 329 IAC 3.1-9, 40 CFR 264.118(c), and this permit.
4. Inspection schedules as required by 329 IAC 3.1-9, 40 CFR 264.15(b)(2), and this permit.
5. Record of facility inspections, as required by 329 IAC 3.1-9, 40 CFR 264.15(b)(2), and this permit. These records must be kept for at least three (3) years from the date of the inspection per 40 CFR 264.15(d).

## **II. GENERAL FACILITY CONDITIONS**

### **A. MAINTENANCE OF FACILITY**

The Permittee shall maintain the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water or surface water which could threaten human health or the environment.

### **B. SECURITY**

The Permittee shall comply with the security provisions of 329 IAC 3.1-9 and 40 CFR 264.14(b) and (c) as described in the Post-Closure Plan, Attachment C, which is incorporated herein by reference.

### **C. GENERAL INSPECTION REQUIREMENTS**

The Permittee shall follow the inspection schedule in Attachment B, which is incorporated herein by reference. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 329 IAC 3.1-9 and 40 CFR 264.15(c). Records of inspections shall be kept as required by 329 IAC 3.1-9 and 40 CFR 264.15(d).

### **D. RECORDKEEPING AND REPORTING**

If the Permittee is a generator of hazardous waste, they shall comply with the biennial report requirements of 329 IAC 3.1-9 and 40 CFR 264.75.

### **E. POST-CLOSURE**

1. Performance Standard The Permittee shall maintain post-closure of the facility as required by 329 IAC 3.1-9 and 40 CFR 264.117 and in accordance with the Post-Closure Plan, Attachment C, which is incorporated herein by reference.
2. Certification of Post-Closure Care No later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee shall submit to the Commissioner, by registered mail, a certification that the post-closure care for the hazardous waste disposal unit was performed in accordance with the specifications of the approved Post-Closure Plan. The certification must be signed by the Permittee and an independent registered professional engineer. Documentation supporting the independent, registered professional engineer's certification must be furnished to the Commissioner upon request until the Commissioner releases the Permittee from

the financial assurance requirements for post-closure care under 329 IAC 3.1-15-6.

F. COST ESTIMATE FOR FACILITY POST-CLOSURE

The Permittee's post-closure cost estimate, prepared in accordance with 329 IAC 3.1-15-5, is specified in the Post-Closure Plan, Attachment C.

1. The Permittee must revise the post-closure cost estimate whenever there is a change in the facility's post-closure plan as required by 329 IAC 3.1-15-5(c).
2. The Permittee must keep at the facility the latest post-closure cost estimate as required by 329 IAC 3.1-15-5(d).

G. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE

The Permittee shall demonstrate continuous compliance with 329 IAC 3.1-15-6 by providing documentation of financial assurance, as specified by 329 IAC 3.1-15-10, in at least the amount of the cost estimates required by Permit Condition II.F. Changes in financial assurance mechanisms must be approved by the Commissioner pursuant to 329 IAC 3.1-15-6.

H. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with 329 IAC 3.1-15-9 whenever necessary.

### III. LANDFILL CONDITIONS

#### A. WASTE IDENTIFICATION

The Permittee disposed of a total of 250,200 tons of the following waste into the North Slag Landfill.

<u>Waste Code</u>	<u>Description</u>
D002, D007	Molten-salt descaling tank sludges
D007	Metal-bearing lime sludge
D007	Air melt shop flue dusts
(Non-Hazardous)	Slags (lime, magnesia, silica, fluorspar, and oxides of metals)
(Non-Hazardous)	Foundry sand
(Non-Hazardous)	Construction debris (soil, rock, concrete, brick, asphalt)
(Non-Hazardous)	Refractories and abrasives
(Non-Hazardous)	Alloy scrap (hard scrap incorporated with the slags and refractories, plus scrap turnings and grindings)
(Non-Hazardous)	Other fabric filter fines
(Non-Hazardous)	Wood, paper, plastics
(Non-Hazardous)	Ferrous scrap

The Permittee disposed of a total of 6,500 cubic yards of waste into the South Sludge Landfill. The landfill only accepted the sludges from Haynes' wastewater pretreatment plant. These sludges consist of metallic hydroxides, carbonates, and sulfates which are characteristically hazardous for chromium (D007).

#### B. LOCATION INFORMATION

The landfills are located in the areas depicted in Attachment A, Figure 2, and Exhibit A incorporated herein by reference.

#### C. SURVEYING AND RECORD KEEPING 329 IAC 3.1-9, 40 CFR 264.309

The owner or operator of a landfill must maintain the following items:

1. On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and



2. The contents of each cell and the approximate location of each hazardous waste type within each cell.

D. POST-CLOSURE 329 IAC 3.1-9, 40 CFR 264.310

After final closure, the owner or operator must comply with all post-closure requirements contained in 329 IAC 3.1-9 and 40 CFR 264.117 through 40 CFR 264.120, including maintenance and monitoring throughout the post-closure care period. The owner or operator must:

1. Maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events;
2. Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 329 IAC 3.1-9 and 40 CFR 264 Subpart F;
3. Prevent run-on and run-off from eroding or otherwise damaging the final cover; and
4. Protect and maintain surveyed benchmarks used in complying with 329 IAC 3.1-9 and 40 CFR 264.309.

#### **IV. CORRECTIVE ACTION CONDITIONS**

##### **A. STANDARD REQUIREMENTS**

###### **1. Corrective Action At The Facility**

In accordance with Section 3004(u) of RCRA (Indiana Code 13-22-2-5) and the regulations promulgated pursuant thereto, the Permittee must institute Corrective Action as necessary to protect human health and the environment for all releases of hazardous waste(s) or hazardous constituent(s) from any solid waste management unit (SWMU) or area of concern (AOC) at the facility, regardless of the time the waste was placed in such units. The Permittee shall perform all such work in a manner consistent with, at a minimum, the Corrective Action Scope of Work found in Attachment E-1.

###### **2. Corrective Action Beyond The Facility Boundary**

In accordance with Section 3004(v) of RCRA (Indiana Code 13-22-2-5) and the regulations promulgated pursuant thereto, the Permittee must implement Corrective Action(s) beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the IDEM's satisfaction that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be addressed under the RCRA Facility Investigation, Corrective Measures Study, and Corrective Measures Implementation phases, as determined to be necessary on a case-by-case basis.

###### **3. Notification**

###### **a. Field Activities**

The Permittee shall notify IDEM at least seven (7) days before engaging in any field activities, such as well drilling, installation of equipment, or sampling. At the request of IDEM, the Permittee shall provide IDEM or its authorized representative split samples of all samples collected by the Permittee pursuant to this permit. Similarly, at the request of the Permittee, IDEM shall allow the Permittee or its authorized representatives to take split or duplicate samples of all samples collected by IDEM under this permit.

b. Submittals

Four (4) copies of all reports, plans, and other submissions relating to or required by this permit shall be sent to:

Indiana Department of Environmental Management  
OLQ Permits Branch  
100 N. Senate Avenue  
Indianapolis, IN 46204  
Attention: Chief, Hazardous Waste Permit Section

B. IDENTIFICATION OF SWMUs

1. Definitions

- a. “Area of Concern (AOC)” means a unit or area that could potentially produce unacceptable exposures or be a potential source of groundwater contamination, but the unit or area does not meet the definition of a solid waste management unit.
- b. “Facility” means all contiguous property under the control of the owner/operator of a facility seeking a permit under Subtitle C.
- c. “Hazardous waste,” as defined in IC 13-11-2-99, means a solid waste or combination of solid wastes that may cause or significantly contribute to an increase in: mortality, serious irreversible illness, or an incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment. This term is further defined in 40 CFR Part 261.3.
- d. “Hazardous constituent” means any constituent identified in Appendix VIII of 40 CFR Part 261, or any constituent identified in Appendix IX of 40 CFR Part 264.
- e. “Release” means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes or hazardous constituents into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents.
- f. “Solid waste” means any garbage, refuse, sludge, or other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, or

agricultural operations or from community activities. This term is further defined in 40 CFR Part 261.2.

- g. “Solid Waste Management Unit (SWMU)” means any discernable unit, permitted or unpermitted, existing or historical, at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

2. SWMUs and AOCs Requiring Corrective Action

Based on the information contained in the administrative record, corrective action is required at the SWMUs and AOCs listed below. A complete list of SWMUs and AOCs is included in Attachment E-2; a map showing the location of these SWMUs and AOCs is included in Figure 2.

- a. SWMU 37 – Former TCA Container Storage Area  
Determine the nature and extent of the chlorinated solvents detected in groundwater near this unit and evaluate the need for remediation. Sampling must include 1,4-dioxane, which is commonly associated with the main chlorinated solvent detected in the groundwater.
- b. AOC 1 – Well SP-5 Area  
Determine the nature and extent of the constituents detected in the groundwater at well SP-5 to determine the source and evaluate the need for remediation.

C. NEWLY IDENTIFIED SWMUs OR RELEASES

1. Notification Requirements

The Permittee shall notify the IDEM, within thirty (30) days of discovery, of the following information requirements for any new SWMU identified at the facility, in accordance with 329 IAC 3.1-13-1 and 40 CFR 270.14(d):

- a. the location of the unit on the site topographic map;
- b. designation of the type of unit;
- c. general dimensions and structural description (supply any available drawings);
- d. when the unit was operated; and

- e. specifications of all waste(s) that have been managed at the unit.

2. Release Information

The Permittee must submit to the IDEM, within thirty (30) day of discovery, all available information pertaining to any release of hazardous waste(s) or hazardous constituent(s) from any new or existing SWMU.

3. Corrective Action

The IDEM will review the information provided in Condition IV.C.1. and 2. above, and may as necessary, require further investigations or corrective measures. The Permittee shall submit a written RFI Workplan to the Section Chief of the Hazardous Waste Permit Section in accordance with Condition IV.D.2.

D. CORRECTIVE ACTION ACTIVITIES

The major tasks and required submittal dates are shown below. Additional tasks and associated submittal dates may also be specified in the Corrective Action Activities Schedule (Condition IV.F.).

1. Interim Measures (IM)

- a. The Permittee may undertake interim measure activities to prevent or minimize the further spread of contamination while long-term remedies are pursued. An IM Workplan shall be submitted to the IDEM for approval before the Permittee initiates any remedial activity. The interim measure(s) must be capable of being integrated into any long-term solution at the facility.
- b. In the event the Permittee identifies an immediate threat to human health or the environment, the Permittee shall immediately notify the Section Chief orally and in writing within seven (7) days summarizing the immediacy and magnitude of the potential threat to human health or the environment.

Upon receiving this information, the IDEM will determine if an IM Workplan is necessary. If one is necessary, the Section Chief will send a notice to the Permittee requiring the submission of an IM Workplan. Within twenty-one (21) days after receiving this notice, the Permittee shall submit to the Section Chief a workplan for approval that identifies the interim measure(s).

The workplan should be consistent with and integrated into any long-term solution at the facility. In addition, the following Interim Measure schedule shall be initiated:

- i. Within five (5) days, the Permittee shall provide an alternate water supply to parties that have a contaminated water supply well;
- ii. Within seven (7) days, the Permittee shall submit a report to the Section Chief detailing the activity pursued and a plan for further Interim Measures activity;
- iii. Within seven (7) days following the Section Chief's transmission of comments, the Permittee shall revise the plan in accordance with the comments; and
- iv. Within seven (7) days following the IDEM's approval or modification of the plan, the Permittee shall implement the revised plan in accordance with the schedule therein.

2. RCRA Facility Investigation (RFI)

The Permittee shall conduct an RFI to thoroughly evaluate the nature and extent of the release of hazardous waste(s) and hazardous constituent(s) from all SWMUs and AOCs identified as requiring an RFI. It may be appropriate to follow the screening steps outlined in the RISC guidance as an initial step in the RFI process.

a. RFI Workplan

The Permittee shall submit a written RFI Workplan to the Section Chief within ninety (90) days after written notification by the Section Chief that further investigation is necessary.

The IDEM will approve, modify and approve, or disapprove and provide comments on the Workplan in writing to the Permittee. Within sixty (60) days of receipt of such comments, the Permittee shall provide a response to the IDEM's comments.

b. RFI Implementation

Within thirty (30) days of the IDEM's written approval of the RFI Workplan, the Permittee shall implement the plan according to the terms

and schedule contained therein.

c. RFI Report

Within ninety (90) days after the completion of the RFI, the Permittee shall submit an RFI Report to the Section Chief. The RFI Report shall describe the procedures, methods, and results of the RFI. The report must contain adequate information to support further corrective action decisions at the facility. After the Permittee submits the RFI Report, the IDEM shall either approve or disapprove the report in writing. If the IDEM disapproves the report, the Section Chief shall notify the Permittee in writing of the deficiencies. The Permittee has thirty (30) days after receipt of the IDEM's comments to submit a revised RFI Report to the Section Chief.

3. Determination of No Further Action

a. Permit Modification

After completion of the RFI, and based on its results and other relevant information, the Permittee may submit an application to the Section Chief for a permit modification under 40 CFR 270.42 to terminate the corrective action tasks of the Corrective Action Activities Schedule for all or a portion of the facility. Tasks identified in Permit Condition IV.F. for the SWMUs, solid waste management areas (a group of SWMUs in an area to be addressed as a single unit), and/or the AOCs identified in the modification (for a determination of no further action) shall be stayed pending a decision by IDEM. This permit modification must conclusively demonstrate that there are no releases of hazardous waste(s), including hazardous constituents, from SWMUs or AOCs at the facility that pose a threat to human health or the environment.

If, based upon review of the Permittee's request for a permit modification, the results of the completed RFI, and other information, IDEM determines that releases or suspected releases that were investigated either are nonexistent or do not pose a threat to human health or the environment, IDEM will grant the requested modification

b. Further Investigations

A determination of no further action shall not preclude the IDEM from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or likelihood of a release from a SWMU or AOC at the facility is likely to

pose a threat to human health or the environment. In such a case, the IDEM shall initiate a modification to the Corrective Action Activities Schedule to rescind the determination made in accordance with Condition IV.D.3.a. Additionally, the IDEM may determine that there is insufficient information on which to base a determination, and may require the Permittee to perform additional investigations as needed to generate the needed information.

4. Corrective Measures Study (CMS) and Remedy Selection

If the IDEM determines, based on the results of the RFI and other relevant information, that corrective measures are necessary, the Section Chief will notify the Permittee in writing that the Permittee shall conduct a CMS. The purpose of the CMS is to develop and evaluate the corrective action alternative(s) that will satisfy the performance objectives specified by the IDEM. The CMS shall be conducted within sixty (60) days of notification by the Section Chief that the CMS is required. This period of time may be extended by the Section Chief if necessary to adequately complete the CMS. Note that this process can be significantly shortened by the selection of presumptive remedies (i.e., remedies that are known to be effective). Additional tasks and associated submittal dates may also be specified in the Corrective Action Activities Schedule (Condition IV.F.).

a. CMS Report

Within sixty (60) days after the completion of the CMS, the Permittee shall submit a CMS Report to the Section Chief. The CMS Report shall summarize the results of the investigations for each remedy studied and must include an evaluation of each remedial alternative. After the Permittee submits the CMS Report, the IDEM shall either approve, modify and approve, or disapprove the Report. If the IDEM disapproves the Report, the Section Chief shall notify the Permittee in writing of the deficiencies. The Permittee has thirty (30) days after receipt of the IDEM's comments to submit a revised CMS Report to the Section Chief. The CMS Report, as approved, becomes an enforceable condition of this permit.

b. CMS Remedy Selection

The IDEM will select a corrective measure for implementation based on the following factors. The corrective measure selected for implementation must: (1) be protective of human health and the environment; (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate further releases of hazardous



waste(s) (including hazardous constituent(s)); (4) minimize the transfer of contamination from one environmental medium to another; and (5) comply with all applicable standards for management of wastes.

If two or more of the corrective measures studied meet the threshold criteria set out above, the IDEM will choose among alternatives for Corrective Measures Implementation by considering remedy selection factors including: (1) long-term reliability and effectiveness; (2) the degree to which the corrective measure will reduce the toxicity, mobility or volume; (3) the corrective measure's short-term effectiveness; (4) the corrective measure's implementability; and (5) the relative cost associated with the alternative. In selecting the corrective measure(s), the IDEM may also consider such other factors as may be presented by site-specific conditions.

5. Permit Modification

Within thirty (30) days of IDEM's selection of a corrective measure, IDEM or the Permittee will initiate a permit modification, pursuant to 40 CFR 270.41 or 40 CFR 270.42, respectively, for the implementation of the corrective measure(s) selected.

6. Corrective Measures Implementation (CMI)

a. If the corrective measure(s) recommended in the Corrective Measures Study Report is (are) not the corrective measure(s) selected by IDEM after consideration of public comments, the Section Chief shall inform the Permittee in writing of the reasons for such decision. Thirty (30) days after the effective date of the permit modification, the Permittee shall implement the corrective measure(s).

b. Financial Assurance

As part of the permit modification of this permit to incorporate the CMI, the Permittee shall provide financial assurance in the amount specified by the IDEM for necessary corrective action activities as required by 40 CFR 264.101(b) and (c).

7. Incorporation of plans and reports

All approved plans and reports prepared for this permit shall be incorporated into this permit on the date the Section Chief or his/her designee approves such plan or report.

E. DISPUTE RESOLUTION

1. If IDEM disapproves or modifies and approves any submission required by Condition IV. of the permit, IDEM shall provide the Permittee with a written notice setting forth the reasons for the disapproval or modification and approval.
2. If the Permittee disagrees, in whole or in part, with any written decision concerning IDEM's disapproval or modification and approval of any submission required by Condition IV. of the permit, the Permittee shall notify IDEM of the dispute. The Permittee and IDEM shall informally, and in good faith, endeavor to resolve the dispute.
3. If the Permittee and IDEM cannot resolve the dispute informally, the Permittee may pursue the matter formally by submitting a written statement of position to the Commissioner or his/her designee, within twenty-eight (28) days of receipt of IDEM's written disapproval or modification and approval. The Permittee's statement of position shall set forth the specific matters in dispute, the position that the Permittee asserts should be adopted as consistent with the requirements of the permit, the basis for the Permittee's position, and shall include any supporting documentation. If the Permittee fails to follow any of the requirements contained in this paragraph, then it shall have waived its right to further consideration of the disputed issue.
4. IDEM and the Permittee shall have an additional fourteen (14) days from the date of the Commissioner's receipt of the Permittee's statement of position to meet or confer to attempt to resolve the dispute. This time period may be extended by IDEM for good cause. If agreement is reached, the Permittee shall submit a revised submission, if necessary, and shall implement the submission in accordance with such agreement.
5. If the IDEM and the Permittee are not able to reach agreement within the 14-day period, or such longer period corresponding to IDEM's extension for good cause, the Permittee may submit any additional written arguments and evidence not previously submitted, or further explain any arguments or evidence previously submitted, to the Commissioner. Based on the record, the Commissioner, or delegate, will thereafter issue a written decision that shall include a response to the Permittee's arguments and evidence. This written decision will constitute final agency action.
6. Notwithstanding the invocation of this dispute resolution procedure, the Permittee shall proceed to take any action required by those portions of the submission and of the permit that IDEM determines are not substantially affected by the dispute. The activity schedule for those portions of the

submission and of the permit which are substantially affected by the dispute shall be suspended during the period of dispute resolution.

F. CORRECTIVE ACTION ACTIVITIES SCHEDULE

<u>Activity</u>	<u>Due Date</u>
1. IM Workplan	21 days after notice by the Section Chief or his/her designee
2. RFI Workplan	90 days after notification by the Section Chief or his/her designee
3. Notification of newly identified SWMUs	30 days after discovery
4. RFI Workplan for newly identified SWMUs	90 days after receipt of Section Chief's notification
5. RFI Workplan modification	60 days after receipt of Section Chief's comments
6. RFI Implementation	30 days after RFI Workplan approved
7. RFI Report	90 days after completion of RFI
8. RFI Report Modification	30 days after receipt of Section Chief's comments
9. Progress Reports on Tasks I through IV (See Corrective Action Scope of Work)	Quarterly, on the tenth day of January, April, July, and October of each year after effective date of permit
10. CMS Report	60 days after receipt of Section Chief's notification
11. CMS Report modification	30 days after receipt of Section Chief's comments
12. Permit Modification for Corrective Measure Implementation	30 days after receipt of Section Chief's notification (Modification may be a Class 1, 2, or 3 at Section Chief's discretion)

<b><u>Activity</u></b>	<b><u>Due Date</u></b>
13. CMI Program Plan	30 days after effective date of permit modification
14. CMI Program Plan Modification	30 days after receipt of Section Chief's comments
15. CMI Reports	Quarterly until construction of corrective measure is complete
16. CMI Report Modification	30 days after receipt of Section Chief's comments
17. Operation and Maintenance Progress Reports	Quarterly, on the tenth day of January, April, July, and October of each year after effective date of permit

## **V. GROUNDWATER MONITORING CONDITIONS – NORTH SLAG LANDFILL**

### **A. GROUNDWATER MONITORING PROGRAM**

A traditional groundwater monitoring program, conducted under 40 CFR 264, Subpart F, has proven ineffective in monitoring the North Slag Landfill because other on-site and off-site sources of impact are present near the North Slag Landfill. A detailed understanding of the hydrogeology around the North Slag Landfill and an alternate mechanism of monitoring the North Slag Landfill are presented in Exhibit F. The groundwater monitoring plan outlined in this permit has been developed under 40 CFR 264.90(f), which allows the Commissioner to approve an alternative monitoring program under conditions such as found at the North Slag Landfill, and is based on a comparison of groundwater monitoring and leachate quality data. The elements of this plan are detailed in Attachment D (Groundwater Monitoring), Exhibit I (Post-Closure Groundwater Sampling and Analysis Procedures), and Exhibit J (Statistical Methods for Evaluating Groundwater Monitoring Data).

#### Constituents

Constituents to be monitored in the groundwater, and the rationale for their selection, are outlined in Attachment D, Section D-4c(3).

### **B. GROUNDWATER MONITORING SYSTEM**

#### **1. Monitoring System**

The groundwater monitoring system is described in Attachment D.

#### **2. Operation and Maintenance**

The Permittee will operate and maintain the groundwater monitoring system as outlined in Exhibit I (Post-Closure Groundwater Sampling and Analysis Procedures).

#### **3. Installation of Monitoring Wells**

In the event that new, or replacement, monitoring wells are necessary, the Permittee will submit a written request for a permit modification to authorize a change to the approved groundwater monitoring system. The Permittee will consult with IDEM and seek approval prior to initiating any well installation program or other substantive changes in the monitoring network or program.

C. SAMPLING PROCEDURE

The Permittee will use the sampling procedures described in Exhibit I (Post-Closure Groundwater Sampling and Analysis Procedures) to collect, preserve, and control all groundwater samples.

D. STATISTICAL EVALUATIONS

The Permittee will determine whether there is statistically significant evidence of increased contamination for each hazardous constituent in each monitoring well by statistically analyzing groundwater monitoring results as outlined in Exhibit J (Statistical Methods for Evaluating Groundwater Monitoring Data).

E. FREQUENCY FOR COLLECTING SAMPLES AND CONDUCTING EVALUATIONS

The Permittee will sample monitoring wells at the North Slag Landfill quarterly following the sampling and evaluation program outlined in the Post-Closure Sampling and Analysis Procedures in Exhibit I and the Statistical Methods for Evaluating Groundwater Monitoring Data in Exhibit J.

F. DETECTION OF AN INCREASING CONCENTRATION TREND

If the Permittee determines, pursuant to Permit Condition V.D., that there is an increasing trend in the concentration of any constituent the Permittee will follow the analysis and reporting procedures in Section D-4e of Attachment D.

G. PERMIT MODIFICATIONS

If the Permittee determines that the monitoring program no longer satisfies the requirements for monitoring outlined in Permit Condition V.A. the Permittee must, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

H. RECORD KEEPING AND REPORTING

Within 60 days of the completion of each routine or verification groundwater sampling event, the Permittee will enter the results of each groundwater sampling event into the facility record. Additionally, a complete groundwater report (two hard copies and one digital copy) will be submitted annually.

## **VI. GROUNDWATER MONITORING CONDITIONS – SOUTH SLUDGE LANDFILL**

### **A. GENERAL DESCRIPTION OF THE GROUNDWATER MONITORING SYSTEM AND THE UPPERMOST AQUIFER**

The groundwater monitoring system for the South Sludge Landfill is based on hydrogeologic investigations conducted in 1986 and 1989 on file with the IDEM and USEPA (Section 2 of Corrective Action Permit Application, Volume III, February, 1986, and Haynes South Sludge Landfill Additional Hydrogeologic Investigation, October, 1989). The hydrogeologic site characterization is summarized in Section 4 of the March 2007 permit renewal application on file at the department. The South Sludge Landfill is underlain by approximately 57 feet of glacial till which is divided into two hydrostratigraphic units: the upper Clayey Till Unit, with an approximate thickness of 24 feet; and the lower Sandy Till Unit, with an approximate thickness of 33 feet. The monitoring system includes separate groups of wells in each of the two hydrostratigraphic units. Four down-gradient wells monitor the upper Clay Till Unit, three down-gradient wells monitor the lower Sandy Till Unit and the three up-gradient wells are used only for monitoring groundwater elevation in the two units.

### **B. TYPE OF MONITORING PROGRAM; 40 CFR 270.14(c)(7) AND 264.99**

The Permittee shall continue to implement a compliance monitoring program in accordance with 264.99. The requirement to enter into the compliance monitoring program resulted from the historical detection of various hazardous constituents during monitoring for 40 CFR Part 264, Appendix IX constituents at the facility. This historic groundwater data is described in the permit application and groundwater data reports on file at the IDEM. The Permittee has not demonstrated the source of all the hazardous constituents detected in the groundwater. Therefore, all of the hazardous constituents found in the groundwater are expected to be in or derived from the waste.

Under the compliance monitoring program the Permittee shall sample the monitoring points specified in the Permit Condition VI.D. for the for the chemical parameters and hazardous constituents specified by the GWPS in Permit Condition VI.E. semi-annually throughout the post-closure care period.

### **C. POINT OF COMPLIANCE; 40 CFR 270.14(c)(3) AND 264.95**

The point of compliance shall be defined as the vertical surface located at the hydraulically down-gradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated unit. For the South Sludge Landfill the point of compliance is expressed at the ground surface as the line connecting wells SP-9, SP-1, SP-7R, SP-2/2R and SP-6B/6R as shown in Figure 4.

D. WELL LOCATION, CONSTRUCTION AND MAINTENANCE; 40 CFR 270.14(c)(5), 270.14(c)(6)(ii), 264.97(a-c), and 264.99(b)

1. The Permittee's compliance groundwater monitoring system for the South Sludge Landfill shall consist of monitoring wells SP-1, SP-2, SP-6B and SP-9 in the upper Clayey Till Unit, and wells SP-2R, SP-6R and SP-7R in the lower Sandy Till Unit. In addition, up-gradient wells SB-3, SP-4 and SP8B shall be included in the compliance monitoring program for the purpose of water-level monitoring. The monitoring well and observation well locations are shown in Figure 4.
2. The Permittee shall inspect and maintain the wells and sampling-related equipment at least semi-annually in accordance with the procedures described in the SAP provided in Exhibit I. The Permittee shall redevelop a well prior to sampling if it has accumulated sediment in excess of 20 per cent of the saturated screen length.
3. If it is determined that an existing monitoring well cannot yield representative samples, the Permittee must replace the monitoring well in accordance with 40 CFR 264.97 and 264.99, and submit a Class 1 Permit Modification meeting the requirements of 40 CFR 270.42. This modification must be submitted to the Commissioner within seven (7) days after the change is put into effect. The replacement monitoring well must meet the same depth, design and material specifications as the existing monitoring well, and be located within a ten-foot radius of same.
4. The Permittee shall construct new wells as needed in accordance with Attachment D. Detailed construction logs for existing wells are shown in Exhibit H.
5. The Permittee shall submit to the Commissioner a report on the progress of any new borings, new or replacement wells, well removals, well repairs, or well developments, within sixty (60) days of completion. Reports shall describe the work performed, including, but not limited to, well as-built diagrams, boring logs, sample analytical results, well development data, hydraulic conductivity testing data, surveyed elevation data and any other pertinent information.

E. GROUNDWATER PROTECTION STANDARD; 40 CFR 270.14(c)(7), 264.99(a), 264.92, 264.93, and 264.94

1. The Permittee shall collect groundwater samples from the monitoring wells specified in Permit Condition VI.D. to determine whether the regulated unit is in compliance with the groundwater protection standard (GWPS) (specified at Permit Condition VI.E.2.) at the POC (specified at Permit Condition VI.C.) during the compliance period (specified at Permit Condition VI.E.3.)



2. The groundwater protection standard (GWPS) is comprised of the following list of hazardous constituents at the concentration limits indicated in mg/L:

Arsenic (0.05)	chloroethane (0.0117)	1,1,1-trichloroethane (0.200)
barium (1.0)	chloroform (0.0032)	trichloroethene (0.005)
cadmium (0.005)	1,1-dichloroethane (0.0037)	vinyl chloride (0.002)
chromium VI (0.05)	1,2-dichloroethane (0.005)	Endrin (0.0002)
chromium total (0.05)	1,1-dichloroethene (0.007)	Gamma-BHC (0.0002)
lead (0.015)	fluorotrichloromethane (0.0185)	Methoxychlor (0.04)
mercury (0.002)	methylene chloride (0.005)	Toxaphene (0.003)
nickel (0.04)	methyl ethyl ketone (0.0185)	2,4-D (0.07)
selenium (0.01)	tetrachloroethene (0.005)	2,4,5-TP (0.01)
silver (0.05)	trans-1,2-dichloroethene (0.100)	phenols (0.001)

Note: All metals will be analyzed for dissolved form.

3. The remainder of the compliance period, during which the GWPS applies, is equal to 12 years, beginning at the effective renewal date of the permit.
4. In addition, the Permittee shall monitor for the general water quality parameters, specific conductance, pH, and temperature. The analytical data for these three constituents shall be reported to IDEM along with the results of the statistical analyses for the GWPS constituents.

F. SAMPLING AND ANALYSIS PROCEDURES; 40 CFR 264.97(d),(e), and 264.99(g)

1. The Permittee shall obtain and analyze samples from the groundwater monitoring wells specified in Permit Condition VI.D. using the techniques, procedures and equipment described in Attachment D and Exhibit I for sample collection, preservation, shipment, chain-of-custody and analysis.
2. The Permittee shall sample the monitoring wells for compliance monitoring semi-annually each year during the post-closure period.
3. At least annually, the Permittee shall analyze samples from all of the compliance wells specified in Permit Condition VI.D. for all constituents contained in Appendix IX of 40 CFR 264 to determine whether additional hazardous constituents are present in the aquifer and, if so, at what concentration. Analytical methods for Appendix IX parameters are provided in the Sampling and Analysis Plan in Exhibit I, Table 5.1.
4. If the Permittee finds Appendix IX constituents in the groundwater that are not already identified in the permit as monitoring constituents, the Permittee may resample within one month of the receipt of results for the original sampling event. The Appendix IX analysis is then repeated. If the second analysis confirms the

presence of new constituents, the Permittee must report the concentration of these additional constituents to the Commissioner within seven days after the completion of the second analysis and add them to the GWPS monitoring list. The concentration limit for new constituents shall adopt the Indiana Risk Integrated System of Closure (RISC) residential concentration for that constituent presiding at the time of the addition.

5. The Permittee shall submit the results of these analyses and any verification analyses or 40 CFR 264 Appendix IX analyses (including deliverable requirements of Attachment D, Exhibit I, and Exhibit J) to the Commissioner within sixty (60) days of receipt of the final laboratory technical report unless delays beyond the Permittee's control occur; in which case, the Commissioner shall be notified with the reason for delay within the sixty (60) day period.

G. GROUNDWATER ELEVATION; 40 CFR 264.97(f) and 264.98(e)

1. The Permittee shall determine the water-level elevation in each groundwater monitoring well or observation well specified in Permit Condition VI.D. each time the groundwater is sampled in accordance with Permit Condition VI.F., Attachment D, and Exhibit I. Using this information, the Permittee shall determine the hydraulic head difference, and the direction and rate of groundwater flow in the aquifer units beneath Landfill. The Permittee shall submit the results of these determinations to the Commissioner by March 1 of the following year. The Permittee may use other monitoring wells or observation wells for the determination of groundwater flow rate and direction with prior approval from the Commissioner.
2. The Permittee shall submit a Class 2 Permit Modification if and when the groundwater flow direction evaluation under Permit Condition VI.G.1. indicates that the monitoring wells are no longer adequately monitoring the compliance point as defined by the waste boundary. This proposal shall be submitted to the Commissioner ninety (90) days prior to any changes to the groundwater monitoring system.

H. STATISTICAL PROCEDURES; 40 CFR 270.14(c)(7)(vi), 264.97(h) and 264.99(c),(d),(f)

1. The Permittee shall follow the statistical procedures as described in Exhibit J, except where they differ from the following modifications: The Permittee shall construct Confidence Intervals (CI) in order to determine the average concentration of each GWPS constituent as an interval with a 99% confidence level for each monitoring point and each sampling event. When the upper limit of the Confidence Interval exceeds the GWPS concentration limit, the constituent shall be considered to be out of compliance with the GWPS. This test shall be done at a Type I error level no less than 0.01 for each sampling event. This statistical approach complies with 40 CFR

264.97(h)(5) and 264.97(i)(2), and meets the latest requirements as specified in RCRA groundwater monitoring regulations, IDEM guidance and the most recent statistical guidance document published by the USEPA in July 1992.

2. The Permittee shall conduct statistical comparisons of monitoring well data to the GWPS at least semi-annually throughout the post-closure period beginning with the first semi-annual sampling event following the effective date of the permit.
3. The Permittee shall use the PQLs listed in Table 5.1 of the Sampling and Analysis Plan (Exhibit I) as the reporting limits for hazardous waste constituent analyses. The constituent reporting limits are appropriate to allow the determination of statistically significant increases.
4. The Permittee shall continue compliance monitoring if none of the comparisons of compliance well data to the GWPS show a statistically significant exceedance using the statistical procedure described in Exhibit J.
5. If any constituent in the monitoring wells exceeds the statistical criteria, the Commissioner shall be notified within 7 days that there is a statistically significant exceedance, and immediately (within 14 days of providing notification) the Permittee shall resample the well that failed, and retest for those parameters that showed a statistically significant exceedance. Within sixty (60) days after collection of the verification sample, the Permittee shall perform the statistical procedure described in Permit Condition VI.H.1. If these test results show no statistically significant difference, then the Permittee shall continue compliance monitoring. However, if any retest result shows a statistically significant exceedance using the aforementioned statistical procedure, the Permittee shall proceed to comply with Permit Condition VI.I.4.

I. REPORTING, RECORD KEEPING AND RESPONSE; 40 CFR 264.97(j), and 264.99(g)

1. The Permittee shall enter all monitoring, testing, and analytical data obtained pursuant to Permit Conditions VI.B., VI.E., VI.F., VI.G. and VI.H. in the operating record.
2. The Permittee shall submit an electronic report of the laboratory analytical results and field parameters for each required groundwater sampling event to the IDEM within 60 days following receipt of the results from the laboratory. The electronic report must be in the required format (available at the IDEM website) and submitted to the official IDEM website for electronic data submittal currently located at the following web address (as of 5/18/2006):  
<http://www.in.gov/idem/programs/land/datasubmittal/digdatasubmittal.html>.

3. The Permittee shall submit two (2) paper copies of the laboratory analytical results and associated statistics for each required groundwater sampling event obtained pursuant to Permit Conditions VI.B, VI.E., VI.F., VI.G. and VI.H. to the IDEM within 60 days following receipt of the results from the laboratory, addressed to:

Karyl K. Schmidt, L.P.G.  
Geology Section Chief  
Indiana Dept. of Environmental Management  
Office of Land Quality, Permits Branch MC 65-45  
100 N. Senate Ave., IGCN 1101  
Indianapolis, IN 46204-2251

4. If upon completion of the verification sampling, the analytical results at any compliance point monitoring well(s) exceed the statistical criteria, the Permittee will:
  - a. Notify the Commissioner in writing within seven (7) days that there is a confirmed statistically significant exceedance of the GWPS. The notification must indicate which chemical constituents have shown statistically significant evidence of exceedance.
  - b. Within 180 days submit an application for a permit modification to establish a corrective action program meeting the requirements of 40 CFR 264.100 and containing all of the information required under 40 CFR 264.99(h)(2).
  - c. Alternatively, the Permittee may notify the Commissioner within seven (7) days of the intention to make an alternate source demonstration in accordance with 40 CFR 264.99(i).

J. PERMIT MODIFICATION; 40 CFR 264.98(h)

If the Permittee or the Commissioner determines that the compliance monitoring program required by this permit no longer satisfies the requirements of the regulations, the Permittee must submit an application for a permit modification to the Commissioner within ninety (90) days to make the appropriate changes to the program which will satisfy the regulations. The Permittee must assure that monitoring and corrective measures necessary to achieve compliance under 40 CFR 264.92 are taken during the term of the permit.

## VII. COMPLIANCE SCHEDULE CONDITIONS

1. Within sixty (60) days of the effective date of the post-closure permit renewal, submit a revised sampling and analysis plan (Exhibit I) which includes the following information:
  - a. Procedures for the instruments used to monitor conductivity, pH, and temperature during well purging.
  - b. Updated information contained in Table 2.3 and Figure 4.1 (i.e., remove all outdated and erroneous information, include correct information for all existing wells, and confirm the accuracy of all elevation information by re-surveying if necessary).
  - c. Revised Monitoring Well Inspection Form without “annual” in the title, and reconciled with permit condition for well inspection.
  - d. Additions to Section 2.4.2, including:
    - When purging wells for sampling, pumping or bailing rates shall not cause any visual or audible signs of water turbulence;
    - Purging rates will not exceed 500ml per minute;
    - For wells that do not purge dry, conductivity, pH, and temperature will be monitored to establish well stabilization for at least three (3) consecutive measurements, prior to sample collection, in accordance with the following stabilization criteria:  
pH = (+ -) 0.5 standard pH units; specific conductance = (+ -) 10  $\mu$ mhos;  
temperature = (+ -) 1.0 °C; and
    - Well stabilization data will be recorded on the Monitoring Well Sampling Form.
2. Within sixty (60) days of the effective date of the post-closure permit renewal, submit a revised statistical evaluation plan (Exhibit J) which includes the following information:
  - a. A detailed description (not an excerpt) and examples of the statistical method that will be used for evaluating whether there has been a statistically significant increase over the GWPS with a 99% confidence level and at a Type I error level no less than 0.01.
  - b. A description and examples of the procedures that will be used to evaluate the data distribution (normality testing, null and alternate hypotheses) and the range of concentration values for each constituent.
  - c. A description and examples of the procedures that will be used to control or correct for seasonal variability and temporal correlation in the data.
  - d. A description and examples of the procedures that will be used to evaluate the data for outliers and trends.

- e. A description and example of the format that will be followed for the summary statistics that will be provided for each constituent.